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ART UNIT PAPER NUMBER

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DATE MAILED 2611

09/22/93

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 6-21-93 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 03 month(s), days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice re Patent Drawing, PTO-948.
- ☒ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, Form PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

- ☒ Claims 1-15 are pending in the application.
Of the above, claims are withdrawn from consideration.
- ☐ Claims have been cancelled.
- ☐ Claims are allowed.
- ☒ Claims 1-15 are rejected.
- ☐ Claims are objected to.
- ☐ Claims are subject to restriction or election requirement.
- ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
- ☐ The proposed drawing correction, filed on has been ☐ approved. ☐ disapproved (see explanation).
- ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. ; filed on
- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
- ☐ Other

EXAMINER'S ACTION

Art Unit 2611

1. Applicant's arguments with respect to claims 1-15 have been considered but are deemed to be moot in view of the new grounds of rejection. This rejection is made non-final.

2. Claims 1-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 1, 2, 10, the recitation "transfer indication" itself has no clear meaning (it is not clear what it indicates).

As to claims 3 and 8-12, for a purpose of clarity applicant should clearly recite the functions or meanings of each of the limitations "first base station code", "first access code", "second base station code", "second access code", "available access code", "traffic channel code", "first traffic signal", "second traffic signal", "first traffic channel access code", "second traffic channel code".

As to claims 4 and 5, for a purpose of clarity applicant should clearly recite the functions or meanings of each of the limitations "performing diversity selection", "performing diversity combination".

As to claim 14, the recitation "said first and second base station transmitters" lacks clear antecedent basis. It is not clear as to what the recitation "signal quality" actually refer

to (should it be changed to --signal quality of the received signals--?). It is not clear to where the "data message" as recited on lines 19-20 is transmitted. It is not clear that all of the "means" in the claimed invention are included in a base station or a mobile station.

3. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

4. Claims 1-9, 14-15 are rejected under 35 U.S.C. § 103 as being unpatentable over Schilling.

Schilling discloses a handoff apparatus and method comprising the limitations of "first and second base stations" 124, 126 (figure 1); "mobile station" 122 (figure 1); "network controller" 130 (figure 1); "first frequency, first code and

second code" (see columns 7-8); "demodulated first and second signals" (see column 15 lines 24-25); "signal processing means" (comprising blocks 301, 303, 305 of figure 4b); "CDMA processing means" (comprising blocks 340, 615, 625).

As to claim 1, Schilling fails to disclose that the "second base station" receives the "transfer indication" (handoff signal) from the "first base station" (instead, the handoff signal is generated from the "mobile station" in Schilling's invention as recited on column 4 lines 58-68, column 5 lines 1-21, column 13 lines 4-35). As to claim 7, Schilling fails to disclose that the "signal strengths" are compared and processed at the "network controller" (instead, the "signal strengths" are processed at the "mobile station" in Schilling's invention as recited on column 5). However, those skilled in the art would have appreciated that in Schilling's invention the "second base station" could receive the handoff signal from either the "first base station" or "mobile station" and that "signal strengths" could be processed at either the "mobile station" or "network controller". In addition, if less work is done at the "mobile station", its cost would be greatly reduced. Therefore, it would have been obvious to one of ordinary skill in the art to modify Schilling's invention as recited in the claims, because it would reduce the cost of implementing the "mobile station".

As to claim 2, Schilling fails to disclose that the first

and second base stations employ different carrier frequencies as recited in the claim. However, it would be appreciated by those skilled in the art that if a minimum frequency bandwidth or a non-interrupted handoff is preferred in Schilling's invention, then the first and second base stations should use the same carrier frequency. Otherwise, if a minimum frequency interference is preferred or one of the two base stations can not provide signals for the mobile station on the frequency employed by another base station, then the different carrier frequencies should be incorporated. Therefore, it would have been obvious to one of ordinary skill to modify Schilling's invention as recited in the claim, because the frequency interference would be greatly reduced.

As to claim 14, Schilling differs from the claimed invention in that it is not provided with the limitations of "A/D converter means", "encoding means" and "CDMA transmitting means" (the figures 4a-5 in Schilling's invention only show the receiver circuits of the "mobile station"). However, since the "mobile station" of figures 4a-5 is a transceiver employed in a CDMA system, providing the aforementioned limitations to Schilling's mobile station would have been obvious to one of ordinary skill in the art in order to have the "mobile station" completely implemented.

As to claims 3, 8 and 15, Schilling fails to specifically

disclose that the "first code" includes a "first base station code" and a "first access code" and that the "second code" includes a "second base station code" and a "second access code". As to claim 9, Schilling fails to disclose a "traffic channel code". However, providing the aforementioned codes into Schilling's invention would have been obvious to one of ordinary skill in the art, because it would allow the "mobile station" to be able to identify which "base stations" it is communicating with and select the base station with ^aleast traffic load.

As to claims 4-6, Schilling differs from the claimed invention in that it is not provide with the limitations of "error correcting the demodulation signals", "diversity selection", "diversity combination". However, both error correction decoding and diversity combination techniques are known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify Schilling's invention as recited in the claim in order to improve the reception quality at the mobile station's receiver.

5. Claims 10-12 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claims.

The prior art fails to disclose the limitations of a "first code, second code and third code" as recited in claims 10-12.

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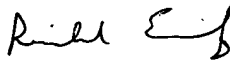
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Vo whose telephone number is (703) 308-6728.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Nguyen Vo

nVo

Sep. 17, 1993


Reinhard J. Eisenzopf 9-20-93
Supervisory Patent Examiner
Group 260